

**IN THE CLAIMS:**

Please substitute the following claims for the same-numbered claims in the application:

1. (Currently Amended) A cooling structure for an integrated circuit structure having multiple integrated circuit chips, said cooling structure comprising:  
a plurality of heat spreaders having different thicknesses, wherein the lower side of each of said heat spreaders is connected to the top of a corresponding one of said integrated circuit chips; and  
a heat dissipating structure having a flat base connected to the upper sides of said heat spreaders through a thermally conductive material,  
wherein said thermally conductive material is positioned in gaps between the upper sides of said heat spreaders and ~~the bottom~~ said flat base of said heat dissipating structure, and  
wherein the smallest of said gaps exists between the top of the thickest of said heat spreaders that is connected to the integrated circuit chip that produces the most thermal energy, relative to the other integrated circuit chips, and ~~the bottom~~ said flat base of said heat dissipating structure.
2. (Canceled).
3. (Original) The structure in claim 1, wherein said heat spreaders have different coefficients of thermal conductivity.

10/672,494

2

4. (Currently Amended) The structure in claim 1, further comprising of a thermal adhesive connecting said heat spreaders to said integrated circuit chips.
5. (Original) The structure in claim 1, wherein said thermally conductive material comprises a plurality of thermally conductive materials having different coefficients of thermal conductivity.
6. (Original) The structure in claim 1, wherein said thermally conductive material comprises one of a thermal grease and a phase change material.
7. (Original) The structure in claim 1, wherein said integrated circuit chips comprise at least one higher power chip and at least one lower power chip, wherein, during operation, said higher power chip generates more thermal energy than said lower power chip.
- 8 – 26 (Canceled).
27. (New) The structure in claim 7, wherein said smallest of said gaps allows optimum cooling of said at least one higher power chip.

28. (New) A cooling structure for an integrated circuit structure having multiple integrated circuit chips, said cooling structure comprising:
- a plurality of heat spreaders, having different thicknesses,
  - wherein the lower side of each of said heat spreaders is connected to the top of a corresponding integrated circuit chip,
  - wherein a first chip of said multiple integrated circuit chips produces the most thermal energy relative to others of said multiple integrated circuit chips, and
  - wherein the thickest of said heat spreaders is connected to said first chip so as to optimize cooling of said integrated circuit structure; and
  - a heat dissipating structure having a flat base connected to the upper sides of said heat spreaders through a thermally conductive material.
29. (New) The structure in claim 28, wherein said heat spreaders have different coefficients of thermal conductivity.
30. (New) The structure in claim 28, further comprising a thermal adhesive connecting said heat spreaders to said integrated circuit chips.
31. (New) The structure in claim 28, wherein said thermally conductive material comprises a plurality of thermally conductive materials having different coefficients of thermal conductivity.

32. (New) The structure in claim 28, wherein said thermally conductive material comprises one of a thermal grease and a phase change material.
33. (New) The structure in claim 28, wherein said integrated circuit chips comprise at least one higher power chip and at least one lower power chip, wherein, during operation, said higher power chip is said one of said multiple integrated chips that produces the most thermal energy.
34. (New) The structure in claim 28, wherein said thermally conductive material is positioned in gaps between the upper sides of said heat spreaders and said flat base of said heat dissipating structure, and wherein the smallest of said gaps exists between the top of said thickest heat spreaders and said flat base.
35. (New) A cooling structure for an integrated circuit structure having multiple integrated circuit chips, said cooling structure comprising:
- a plurality of heat spreaders, having different thicknesses;
  - wherein the lower side of each of said heat spreaders is connected to the top of a corresponding integrated circuit chip,
  - wherein a first chip of said multiple integrated circuit chips produces the most thermal energy relative to others of said multiple integrated circuit chips, and
  - wherein the thickest of said heat spreaders is connected to said first chip so as to optimize cooling of said integrated circuit structure; and

10/672,494

5

a heat dissipating structure having a flat base connected to the upper sides of said heat spreaders through a thermal grease.

36. (New) The structure in claim 35, wherein said heat spreaders have different coefficients of thermal conductivity.
37. (New) The structure in claim 35, further comprising a thermal adhesive connecting said heat spreaders to said integrated circuit chips.
38. (New) The structure in claim 35, wherein said integrated circuit chips comprise at least one higher power chip and at least one lower power chip, wherein, during operation, said higher power chip is said one of said multiple integrated chips that produces the most thermal energy.
39. (New) The structure in claim 35, wherein said thermal grease is positioned in gaps between the upper sides of said heat spreaders and said flat base of said heat dissipating structure, and wherein the smallest of said gaps exists between the top of said thickest heat spreader and said flat base.